



Clean Claims

1. (Amended) Electric machine with at least one magnetic circuit and at least two structural groups that are moveable against each other, said two structural groups being separated from each other by an air gap, and said two structural groups containing at least one soft magnetic body each, partial areas of the surfaces of said at least two structural groups that lie adjacent to said air gap having inhomogeneous properties with regard to the magnetic flux,

wherein at least one said soft magnetic body has a region that is facing the air gap, said region facing the air gap having soft magnetic teeth that are disposed toward said air gap, said region facing the air gap consisting of a material with higher magnetizability and/or higher saturation flux density than the remaining region of said soft magnetic body that is disposed more distant from said air gap, said remaining region of said soft magnetic body belonging to the same said magnetic circuit, and said remaining region of said soft magnetic body possessing in total a larger cross section in direction of the flux than the sum of said teeth that are disposed toward said air gap.

2. Electric machine in accordance with claim 1, wherein at least one said soft magnetic body has teeth at said air gap, said teeth consisting of grain oriented electric sheet, and at least one other said part of said soft magnetic body, said part consisting of electric sheet that is not grain oriented.

3. Electric machine in accordance with claim 1, wherein at least one said soft magnetic body has teeth at said air gap, said teeth being made of a cobalt-iron alloy, and at

least one other said part of said soft magnetic body, said part being made of another iron alloy.

4. Electric machine in accordance with claim 1, wherein at least one said soft magnetic body consists of electric sheet of variable sheet thickness.

5. Electric machine in accordance with claim 1, wherein in a rotating machine said soft magnetic body is stacked in tangential direction and the thickness of said sheet increases as the radius increases.

6. (Amended) Electric machine with at least one magnetic circuit and at least two structural groups that are moveable against each other, said two structural groups being separated from each other by an air gap, and said two structural groups containing at least one soft magnetic body each, partial areas of the surfaces of said at least two structural groups that lie adjacent to said air gap having inhomogeneous properties with regard to the magnetic flux, wherein at least one of said structural groups contains at least two magnetic units said magnetic units consisting of at least one spooled pole segment and two non-spooled half pole segments, said pole segments and said half pole segments being composed of grain oriented electric sheet, said two half pole segments abutting at least one said pole segment in the yoke area.

7. (Amended) Electric machine with at least one magnetic circuit and at least two structural groups that are moveable against each other, said two structural groups being separated from each other by an air gap, and said two structural groups containing at least one soft magnetic body each, partial areas of the surfaces of said at least two structural groups that lie adjacent to said air gap having

inhomogeneous properties with regard to the magnetic flux, wherein at least one of said two structural groups contains at least two adjacent non-spoiled half pole segments and a T-shaped holding element that is arranged between said adjacent half pole segments, said holding element magnetically separating said half pole segments and preventing movement of said half pole segments.

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